


```
PPPPPPPP  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG
PPPPPPPP  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PPPPPPPP  AA      AA  RRRRRRRR  AA      AA  GG
PPPPPPPP  AA      AA  RRRRRRRR  AA      AA  GG
PP        AAAAAAAAAA  RR  RR  AAAAAAAAAA  GG  GGGGCG
PP        AAAAAAAAAA  RR  RR  AAAAAAAAAA  GG  GGGGGG
PP        AA      AA  RR      RR  AA      AA  GG  GG
PP        AA      AA  RR      RR  AA      AA  GG  GG
PP        AA      AA  RR      RR  AA      AA  GG
PP        AA      AA  RR      RR  AA      AA  GG
```

```
LL        IIIIII  SSSSSSSS
LL        IIIIII  SSSSSSSS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SSSSSS
LL        II      SSSSSS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```



```
1 0001 0 MODULE parag ( IDENT = 'V04-000'
2 P 0002 0 %BLISS32C, ADDRESSING_MODE (EXTERNAL = long_relative,
3 0003 0 NONEXTERNAL = long_relative)]
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1 *****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
10 0010 1 * DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
11 0011 1 * ALL RIGHTS RESERVED.
12 0012 1 *
13 0013 1 * THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
14 0014 1 * ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
15 0015 1 * INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
16 0016 1 * COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
17 0017 1 * OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
18 0018 1 * TRANSFERRED.
19 0019 1 *
20 0020 1 * THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
21 0021 1 * AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
22 0022 1 * CORPORATION.
23 0023 1 *
24 0024 1 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
25 0025 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
26 0026 1 *
27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 Processes .PARAGRAPH, .SET PARAGRAPH, .(NO)AUTOPARAGRAPH,
36 0036 1 and .(NO)AUTOTABLE commands.
37 0037 1
38 0038 1 ENVIRONMENT: Transportable
39 0039 1
40 0040 1 AUTHOR: R.W.Friday CREATION DATE: June, 1978
41 0041 1
```


PARAG
V04-000

Revision History

C 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 2 (2)

:	43	0042	1	%SBTTL 'Revision History'
:	44	0043	1	
:	45	0044	1	MODIFIED BY:
:	46	0045	1	
:	47	0046	1	004 KAD00004 Keith Dawson 07-Mar-1983
:	48	0047	1	Global edit of all modules. Updated module names, idents,
:	49	0048	1	copyright dates. Changed require files to BLISS library.
:	50	0049	1	
:	51	0050	1	--

PARAG
V04-000

Module Level Declarations

D 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 3 (3)

```
.. 53      0051 1 %SBTTL 'Module Level Declarations'
.. 54      0052 1
.. 55      0053 1 : TABLE OF CONTENTS:
.. 56      0054 1
.. 57      0055 1 : INCLUDE FILES:
.. 58      0056 1
.. 59      0057 1
.. 60      0058 1 LIBRARY 'NXPORT:XPORT';      ! XPORT Library
.. 61      0059 1 REQUIRE 'REQ:RNODEF';      ! RUNOFF variant definitions
.. 62      0190 1
.. 63      U 0191 1 %IF DSRPLUS %THEN
.. 64      U 0192 1 LIBRARY 'REQ:DPLLIB';      ! DSRPLUS BLISS Library
.. 65      0193 1 %ELSE
.. 66      0194 1 LIBRARY 'REQ:DSRLIB';      ! DSR BLISS Library
.. 67      0195 1 %FI
.. 68      0196 1
.. 69      0197 1
.. 70      0198 1 : EXTERNAL REFERENCES:
.. 71      0199 1
.. 72      0200 1 EXTERNAL
.. 73      0201 1     gca      : gca_definition,
.. 74      0202 1     ira      : fixed_string,
.. 75      0203 1     nmlst    : number_list,
.. 76      0204 1     pdt      : ref pdt_definition,
.. 77      0205 1     sca      : sca_definition;
.. 78      0206 1
.. 79      0207 1 EXTERNAL LITERAL
.. 80      0208 1     rnfinm;      ! Error messages
.. 81      0209 1
.. 82      0210 1 EXTERNAL ROUTINE
.. 83      0211 1     erma,
.. 84      0212 1     gcpos,
.. 85      0213 1     gcskip,
.. 86      0214 1     glnm,
.. 87      0215 1     gtpc,
.. 88      0216 1     outnj,
.. 89      0217 1     rskips;
```


PARAG
V04-000

Routine PARAG

E 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 4 (4)

```

: 91      0218 1 %SBTTL 'Routine PARAG'
: 92      0219 1 GLOBAL ROUTINE parag (handler_code) : NOVALUE =
: 93      0220 1
: 94      0221 1 !++
: 95      0222 1 FUNCTIONAL DESCRIPTION:
: 96      0223 1
: 97      0224 1     See the ABSTRACT, above.
: 98      0225 1
: 99      0226 1 FORMAL PARAMETERS:
100      0227 1
101      0228 1     handler_code - indicates the command to be processed.
102      0229 1     -1          - means set a pending paragraph.
103      0230 1
104      0231 1 IMPLICIT INPUTS:      None
105      0232 1
106      0233 1 IMPLICIT OUTPUTS:     None
107      0234 1
108      0235 1 ROUTINE VALUE:
109      0236 1 COMPLETION CODES:     None
110      0237 1
111      0238 1 SIDE EFFECTS:         None
112      0239 1 --
113      0240 1
114      0241 2 BEGIN
115      0242 2
116      0243 2 SELECTONE .handler_code OF
117      0244 2 SET
118      0245 2
119      0246 2     An autoparagraph was detected by pus.
120      0247 2
121      0248 2 [-1] :
122      0249 2 BEGIN
123      0250 2     outnj ();
124      0251 2
125      0252 2     Skip all spaces and tabs to get to text on line.
126      0253 2     This duplicates handling done by old RUNOFFs.
127      0254 2
128      0255 2     rskips (ira);
129      0256 2
130      0257 2     Always do the indentation.
131      0258 2
132      0259 2     sca_indent = .pdt_indent;
133      0260 2
134      0261 2     Pend the skipping only if this section is not empty.
135      0262 2
136      0263 2     sca_para_pnd = NOT .sca_sect_empty;
137      0264 2 END;
138      0265 2
139      0266 2 [h_autoparagraph] :
140      0267 2 BEGIN
141      0268 2     gca_autopara = true;
142      0269 2
143      0270 2     Disable .AUTOTABLE.
144      0271 2
145      0272 2     gca_autotabl = false;
146      0273 2 END;
147      0274 2
```

PARAG
V04-000

Routine PARAG

F 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1
Page 5
(4)

```
: 148 0275 2 [h_no_autotable, h_no_autoparagr] :
: 149 0276 BEGIN
: 150 0277
: 151 0278
: 152 0279
: 153 0280
: 154 0281
: 155 0282
: 156 0283
: 157 0284 [h_autotable] :
: 158 0285 BEGIN
: 159 0286
: 160 0287
: 161 0288
: 162 0289
: 163 0290
: 164 0291
: 165 0292
: 166 0293 [h_paragraph, h_set_paragraph] :
: 167 0294 BEGIN
: 168 0295
: 169 0296
: 170 0297
: 171 0298
: 172 0299
: 173 0300
: 174 0301
: 175 0302
: 176 0303
: 177 0304
: 178 0305
: 179 0306
: 180 0307
: 181 0308
: 182 0309
: 183 0310
: 184 0311
: 185 0312
: 186 0313
: 187 0314
: 188 0315
: 189 0316
: 190 0317
: 191 0318
: 192 0319
: 193 0320
: 194 0321
: 195 0322
: 196 0323
: 197 0324
: 198 0325
: 199 0326
: 200 0327
: 201 0328
: 202 0329
: 203 0330
: 204 0331
```

Disable both .AUTOTABLE and .AUTOPARAGRAPH.

gca_autopara = false;
gca_autotabl = false;
END;

gca_autotabl = true;
Disable .AUTOPARAGRAPH.
gca_autopara = false;
END;

Get parameters.
glnm (3);
INCR I FROM 1 TO .nmlst_count DO
IF .nmlst_descr (.i) EQL nm_bad
THEN
Ignore entire command if a single argument is bad.
RETURN;
IF .nmlst_count GTR 0
THEN
User supplied at least one parameter.
BEGIN
Use first argument as paragraph indentation,
if it was supplied.
IF .nmlst_descr (1) NEQ nm_null
THEN
pdt_indent = .nmlst_value (1);
IF .nmlst_count GTR 1
THEN
IF .nmlst_descr (2) NEQ nm_null
THEN
pdt_skip = .nmlst_value (2);
Validate "paragraph test page" parameter.

PARAG
V04-000

Routine PARAG

G 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[CRUNOFF.SRC]PARAG.BLI;1 Page 6 (4)

```

: 205      0332  4      IF .nmlst_count EQL 3
: 206      0333  4      THEN
: 207      0334  4
: 208      0335  4      IF .nmlst_descr (3) NEQ nm_null
: 209      0336  4      THEN
: 210      0337  4
: 211      0338  4      IF .nmlst_descr (3) EQL nm_unsigned
: 212      0339  4      THEN
: 213      0340  4      |
: 214      0341  4      |   If 3rd argument is unsigned, that is
: 215      0342  4      |   the test page value.
: 216      0343  4      |
: 217      0344  4      |   pdt_tp = .nmlst_value (3)
: 218      0345  4      ELSE
: 219      0346  4      |
: 220      0347  4      |   Validate 3rd argument if it is signed.
: 221      0348  4      |
: 222      0349  5      |   BEGIN
: 223      0350  5      |
: 224      0351  5      |   LOCAL
: 225      0352  5      |   temp;
: 226      0353  5      |
: 227      0354  5      |   |   Try out adjustment to current test page value.
: 228      0355  5      |   |
: 229      0356  5      |   |   temp = .pdt_tp + .nmlst_value (3);
: 230      0357  5      |
: 231      0358  5      |   IF .temp GEQ 0
: 232      0359  5      |   THEN
: 233      0360  5      |   |
: 234      0361  5      |   |   Save valid adjusted test page setting.
: 235      0362  5      |   |
: 236      0363  5      |   |   pdt_tp = .temp
: 237      0364  5      |   ELSE
: 238      0365  5      |   |
: 239      0366  5      |   |   Invalid test page specification.
: 240      0367  5      |   |   erma (rnfinm, false);
: 241      0368  5      |   |
: 242      0369  5      |   |
: 243      0370  4      |   END;
: 244      0371  4
: 245      0372  3      END;      ! End of parameter processing
: 246      0373  3
: 247      0374  3      IF .handler_code EQL h_set_paragraph
: 248      0375  3      THEN
: 249      0376  3      RETURN;
: 250      0377  3
: 251      0378  3      |
: 252      0379  3      |   Force out the vertical motion so that change bars don't get
: 253      0380  3      |   carried back too far.
: 254      0381  3      |
: 255      0382  3      |   outnj ();
: 256      0383  3      |   sca_indent = .pdt_indent;
: 257      0384  3      |
: 258      0385  3      |   |   Pend the skipping only if this section is not empty.
: 259      0386  3      |
: 260      0387  3      |   sca_para_pnd = NOT .sca_sect_empty;
: 261      0388  3
```



```

: 262          0389  2          END;
: 263          0390  2
: 264          0391  2          TES;
: 265          0392  2
: 266          0393  1          END;

```

! End of PARAG

```
.TITLE      PARAG
.IDENT      \V04-000\

.EXTRN      GCA, IRA, NMLST
.EXTRN      PDT, SCA, RNFINM
.EXTRN      ERMA, GCPOS, GCSKIP
.EXTRN      GLNM, GTPC, OUTNJ
.EXTRN      RSKIPS

.PSECT      $CODE$,NOWRT,2
```

HEX	DISP	OPCODE	REG	DATA	INSTR	COMMENT	PC
57	00000000G	EF	9E	00000	.ENTRY	PARAG, Save R2,R3,R4,R5,R6,R7	0219
56	00000000G	EF	9E	00002	MOVAB	OUTNJ, R7	
55	00000000G	EF	9E	00009	MOVAB	SCA+220, R6	
54	00000000G	EF	9E	00010	MOVAB	PDT, R5	
53	00000000G	EF	9E	00017	MOVAB	GCA+4, R4	
52	00000000G	EF	9E	0001E	MOVAB	NMLST+12, R3	
52	04	AC	D0	00025	MOVL	HANDLER_CODE, R2	0243
FFFFFFFFFF	8F	52	D1	00029	CMPL	R2, #-1	0248
		13	12	00030	BNEQ	1\$	
67		00	FB	00032	CALLS	#0, OUTNJ	0250
00000000G	EF	9F	00035	PUSHAB	IRA		0255
		01	FB	0003B	CALLS	#1, RSKIPS	
		00C5	31	00042	BRW	15\$	0259
03		52	D1	00045	CMPL	R2, #3	0266
		06	12	00048	BNEQ	2\$	
00	B4	01	D0	0004A	MOVL	#1, @GCA+4	0268
		15	11	0004E	BRB	4\$	0272
00000074	8F	52	D1	00050	CMPL	R2, #116	0275
		09	13	00057	BEQL	3\$	
00000076	8F	52	D1	00059	CMPL	R2, #118	
		07	12	00060	BNEQ	5\$	
	00	B4	D4	00062	CLRL	@GCA+4	0280
	08	B4	D4	00065	CLRL	@GCA+12	0281
		04		00068	RET		0243
05		52	D1	00069	CMPL	R2, #5	0284
		08	12	0006C	BNEQ	6\$	
08	B4	01	D0	0006E	MOVL	#1, @GCA+12	0286
	00	B4	D4	00072	CLRL	@GCA+4	0290
		04		00075	RET		0243
000000AA	8F	52	D1	00076	CMPL	R2, #170	0293
		0A	13	0007D	BEQL	7\$	
000000B9	8F	52	D1	0007F	CMPL	R2, #185	
		01	13	00086	BEQL	7\$	
		04		00088	RET		
00000000G	EF	03	DD	00089	PUSHL	#3	0298
		01	FB	0008B	CALLS	#1, GLNM	
	F4	A3	D0	00092	MOVL	NMLST, R1	0300
		50	D4	00096	CLRL	I	
		08	11	00098	BRB	9\$	

PARAG
V04-000

Routine PARAG

I 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1

Page 8
(4)

	04		0094	C340	D1	0009A	8\$:	CMPL	NMLST+160[I], #4	: 0302
				71	13	000A0		BEQL	16\$	:
F4	50			51	F3	000A2	9\$:	AOBLEQ	R1, I, 8\$	:
				51	D5	000A6		TSTL	R1	: 0309
				54	15	000A8		BLEQ	14\$	:
			0098	C3	D5	000AA		TSTL	NMLST+164	: 0319
				05	13	000AE		BEQL	10\$	:
00	B5		F8	A3	D0	000B0		MOVL	NMLST+4, @PDT	: 0321
	01			51	D1	000B5	10\$:	CMPL	R1, #1	: 0323
				0E	15	000B8		BLEQ	11\$	:
			009C	C3	D5	000BA		TSTL	NMLST+168	: 0326
				08	13	000BE		BEQL	11\$	:
	50			65	D0	000C0		MOVL	PDT, R0	: 0327
04	A0		FC	A3	D0	000C3		MOVL	NMLST+8, 4(R0)	: 0328
	03			51	D1	000C8	11\$:	CMPL	R1, #3	: 0332
				31	12	000CB		BNEQ	14\$	:
	51		00A0	C3	D0	000CD		MOVL	NMLST+172, R1	: 0335
				2A	13	000D2		BEQL	14\$	:
	50			65	D0	000D4		MOVL	PDT, R0	: 0339
	01			51	D1	000D7		CMPL	R1, #1	: 0338
				06	12	000DA		BNEQ	12\$	:
08	A0			63	D0	000DC		MOVL	NMLST+12, 8(R0)	: 0344
				1C	11	000E0		BRB	14\$	:
51	08	A0		63	C1	000E2	12\$:	ADDL3	NMLST+12, 8(R0), TEMP	: 0356
				06	19	000E7		BLSS	13\$	: 0358
	08	A0		51	D0	000E9		MOVL	TEMP, 8(R0)	: 0363
				0F	11	000ED		BRB	14\$	:
				7E	D4	000EF	13\$:	CLRL	-(SP)	: 0368
			00000000G	8F	DD	000F1		PUSHL	#RNF INM	:
00000000G	EF			02	FB	000F7		CALLS	#2, ERMA	:
0000000B9	8F			52	D1	000FE	14\$:	CMPL	R2, #185	: 0374
				0C	13	00105		BEQL	16\$	:
	67			00	FB	00107		CALLS	#0, OUTNJ	: 0382
	66		00	B5	D0	0010A	15\$:	MOVL	@PDT, SCA+220	: 0383
04	A6		D8	A6	D2	0010E		MCOML	SCA+180, SCA+224	: 0387
				04	00113	16\$:		RET		: 0393

; Routine Size: 276 bytes, Routine Base: \$CODE\$ + 0000

: 267 0394 1
: 268 0395 1 END
: 269 0396 0 ELUDOM

! End of module

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	276	NOVEC,NOWRT, RD, EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

PARAG
V04-000

Routine PARAG

J 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 9 (4)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
-\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.1
-\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	33	2	86	00:00.3

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:PARAG/OBJ=OBJ\$:PARAG MSRC\$:PARAG/UPDATE=(ENH\$:PARAG)

: Size: 276 code + 0 data bytes
: Run Time: 00:06.7
: Elapsed Time: 00:20.7
: Lines/CPU Min: 3535
: Lexemes/CPU-Min: 18982
: Memory Used: 76 pages
: Compilation Complete

0347 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY